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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/925,410

08/08/2001

Richard Blount

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20350

7590

11/02/2004

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EXAMINER

GHEBRETINSAE, TEMESGHEN

ART UNIT

PAPER NUMBER

2637

DATE MAILED: 11/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/925,410

Applicant(s)

BLOUNT ET AL.

Examiner

Temesghen Ghebretinsae

Art Unit

2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 11-28 and 31-33 is/are rejected.
- 7) ☒ Claim(s) 9, 10, 29 and 30 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/24/02</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. It would be of great assistance to the Office if all incoming papers pertaining to a filed application carried the following items:

1. Application number (checked for accuracy, including series code and serial no.).
2. Group art unit number (copied from most recent Office communication).
3. Filing date.
4. Name of the examiner who prepared the most recent Office action.
5. Title of invention.
6. Confirmation number (See MPEP § 503).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-8,11-12,15,20-28,31,33 are rejected under 35 U.S.C. 102(b) as being anticipated by Dankberg et al (5,596,439).

Consider claims 1-8,11-12,15,20-28,31 and 33.

As for claims 1,11,31,33. Dankberg discloses a self interference cancellation for relay communication comprising: means for generating at the first device a modulated near signal (102); means for transmitting the modulated near signal from the first device to the relay station S1 (104); means for receiving at the first device a composite signal (S"1,S"2) from the relay station, the composite signal containing a relayed version of the modulated near signal and a relayed version of modulated fat signal transmitted from the second device (110); means for

providing the composite signal in representation as a first interface signal to a canceller module (112); means for providing representation of the modulated near signal as a second interface signal to the canceller module (the output from 102 to the interference canceller); means for canceling at the canceller module a portion of the relayed version of the modulated near signal from the composite signal to produce cancellation processed signal as a third interface signal and means demodulating the cancellation processed signal (114). See fig.6 and col.4, lines 6-34).

As for claims 2-8, 12,15,20-28, the first and third interface signal are not a baseband; the first interface frequency is an IF; the second interface frequency is an RF; and the third interface frequency is an RF; the first, second and third interface signal are provided or outputted at readily accessible locations; and the second interface signal is provided from a point in its signal path immediately preceding a signal emission stage. The transmitter and the receiver include an antenna (106,108); the transmitter includes a splitter and a mixer. (See col.4, lines 6-34)

4. Claims 1,11,15,20,31-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Dankberg et al.

As for claims 1,11,31,33. Dankberg discloses a self interference cancellation for relay communication comprising: means for generating at the first device a modulated near signal (106); means for transmitting the modulated near signal from the first device to the relay station (102); means for receiving at the first

device a composite signal from the relay station, the composite signal containing a relayed version of the modulated near signal and a relayed version of modulated far signal transmitted from the second device (110); means for providing the composite signal in representation as a first interface signal to a canceller module (112); means for providing representation of the modulated near signal as a second interface signal to the canceller module (the output from 106 to the interference canceller); means for canceling at the canceller module a portion of the relayed version of the modulated near signal from the composite signal to produce cancellation processed signal as a third interface signal and means demodulating the cancellation processed signal (114). See fig.6 and col.4, lines 6-34).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 13-14 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dankberg et al (5,596,439) in view of Nam (us2001/0016014).

Dankberg discloses all the subject matter as claimed (see above). Dankberg is silent about the amplifiers. Nam discloses a communication system comprising a transmitter including an amplifier (HPA); and a receiver including an amplifier (LNA). Thus, it is well known in the art of communication to have an amplifier at

the transmitter end for amplifying the output signal before being applied to the antenna; and to have an amplifier at the receiver end to amplify the received signal before being applied to the demodulator so the system can be more efficient.

Allowable Subject Matter

7. Claims 9-10 and 29-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Temesghen Ghebretinsae whose telephone number is 571-272-3017. The examiner can normally be reached on Monday-Friday from 8 to 6. The examiner can also be reached on alternate

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel, can be reached on 571-272-2688. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Temesghen Ghebretinsae
Primary Examiner
Art Unit 2637

T.G.

10/29/04.

TEMESGHEN GHEBRETINSAE
PRIMARY EXAMINER
10/29/04